

**ABSTRACT**

Methods for the synthesis, isolation, and purification of procyanidin B2 are disclosed. The synthetic methods utilize epicatechin as a starting material and produce procyanidin B2 in high yields. The isolation methods extract procyanidin B2 from a sample of bark powder from plant matter of the genus *Uncaria*. The isolated and/or synthesized procyanidin B2 is used to treat amyloid disease, such as Alzheimer's disease and Parkinson's disease. Pharmaceutical compositions containing the synthesized and/or isolated procyanidin B2 are also disclosed.